

REMARKS/ARGUMENTS

Claim 1 has been amended to recite that the reaction to obtain the modified polyphenylene ether resin is carried out in a state where the polyphenylene ether is a solid. Support for this amendment is found on page 23 of the specification. No new matter is introduced by this amendment

35 U.S.C. § 112, Second Paragraph

Claims 7-15 stand rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite since there is no antecedent basis for formula (1) in claim 7. Claim 7 has been amended to recite “formula (1) as represented in claim 1” per the Examiner’s suggestion. Therefore, this rejection should be withdrawn as moot.

35 U.S.C. § 102(b)

Claims 7, 9, 10, 14, and 15 stand rejected as allegedly being anticipated by Sybert et al., Masuyama et al., Nakano, Brown et al., European Patent Nos. 546,497 and 451,563; Okabe et al. or Vianello et al. According to the Office Action, the cited references set forth the claimed processes. Office Action at 3. The claims, as amended, require the reaction to obtain the modified polyphenylene ether resin is carried out in a state where the polyphenylene ether is a solid. None of the cited references teach or suggest carrying out the process for preparing a modified polyphenylene in a state where the polyphenylene ether is a solid. Therefore, the cited references fail to teach all the elements of the claims. The rejection under 35 U.S.C. § 102(b) should be withdrawn for at least this reason.

35 U.S.C. § 103(a)

Claims 8 and 12 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Sybert et al., Masuyama et al., Nakano, Brown et al., European Patent Nos.

546,497 and 451,563; Okabe et al., and Vianello et al. According to the Office Action, “the modified poly(2,6-dimethyl-1,4-phenylene)ether having the same structure as the elected species inherently possesses a melting point within the range of from 240° C to 260° C as required in claim 8” and “inherently attains a powder form as necessitated by claim 8.” Office Action at 4. The Applicants respectfully traverse this rejection.

✓ A prima facie case of obviousness requires that the cited references must teach or suggest all the claim limitations. MPEP § 2142 (Eight Edition). The Office Action does not identify any portion of the cited references or any other references that teach or suggest the allegedly inherent characteristics of the poly(2,6-dimethyl-1,4-phenylene)ether. Therefore, the Office Action fails to establish a prima facie case of obviousness for the claimed invention.

✓ Furthermore, the claims as amended require that the reaction to obtain the modified polyphenylene ether resin is carried out in a state where the polyphenylene ether is a solid. The solution process referred to in the cited references requires that a solvent remain in the polyphenylene ether (PPE). The residual solvent evaporates upon melt-kneading the modified PPE and other resins (e.g., polystyrene or polyamide) resulting in defects such as the deterioration of the interlocking properties of the modified PPE or restricting the available extruding conditions for removing the evaporated solvent. The claimed solid process does not contain a residual solvent and therefore does not have these defects. None of the cited reference teach or suggest carrying out the reaction in a state where the polyphenylene ether is a solid. Therefore, this rejection should be withdrawn for at least these reasons.

Claims 1-6 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Sybert et al., Masuyama et al., Nakano, Brown et al., European Patent Nos. 546,497 and 451,563; Okabe et al., and Vianello et al in view of the Kobonshi Ronbunshu articles by Mitui et al. and Takayama et al. According to the Office Action, the primary references use poly(2,6-dimethyl-1,4-phenylene)ether as a the polyphenylene ether and the Mitui et al. and Takayama, et al. references each teach the lack of Fries-type rearrangement when

poly(2,6-dimethyl-1,4-phenylene)ether is prepared by head-to-tail polymerization.

As described above, the claims as amended require that the reaction to obtain the modified polyphenylene ether resin is carried out in a state where the polyphenylene ether is a solid. None of the cited references teach or suggest this requirement of claims 1-6. Therefore, the rejection under 35 U.S.C. § 103(a) should be withdrawn for this reason and the reasons described above with reference to claims 8 and 12.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

Dated: April 21, 2003

Respectfully submitted,

By 
Charles E. Miller

Registration No.: 24,576

Jeremy A. Cubert

Registration No.: 40,399

DICKSTEIN SHAPIRO MORIN &
OSHINSKY LLP

1177 Avenue of the Americas

New York, NY 10036-2714

(212) 835-1400

Attorneys for Applicants